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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,231

02/02/2007

Marc Husemann

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06/07/2011

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EXAMINER

NELSON, MICHAEL B

ART UNIT

PAPER NUMBER

1798

MAIL DATE

DELIVERY MODE

06/07/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,231	Applicant(s) HUSEMANN ET AL.	
	Examiner MICHAEL NELSON	Art Unit 1798	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendments of 04/05/11 have been entered. Claims 2-6, 8 are currently under examination on the merits. The previous 112 2nd paragraph rejections are withdrawn due to applicant's arguments.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 2, 3, 5, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Copperwheat (U.S. 6,846,759) as applied to claim 1 above, in view of Watada (U.S. 6,012,641).
5. Regarding claims 5 and 6, Watada discloses a method for bonding chip modules, (the top 1 and 2 that bear the chip 4, Fig. 4a and b) with card bodies (the bottom 1 and 2, Fig. 4b) in which a general thermoplastic adhesive is called for to bind the polyester (PET) substrate layers together (C3, L5-15, C4, L55-C5, L10). Copperwheat discloses a

Art Unit: 1798

polyester based thermoplastic adhesive that is known to bond with polyester substrates (C3, L50-C4, L60). The Griltex adhesive meets the instantly claimed properties (C4, L5-60, Griltex 9 is the same adhesive used in Example 2 of the instant specification on page 10). Hence it would have been obvious to have used the Griltex polyester adhesive of Copperwheat to bond the PET layers making up the chip module and the card body in Watada because the polyester adhesive was known to bond polyester substrates and because Watada calls for a general thermoplastic adhesive that can bond polyester substrates (C4, L55-C5, L10).

6. Regarding claims 2 and 8, the thickness of the adhesive used to bond the substrates is disclosed in Watada as being controllable to prevent deformation of the card (C4, L1-10) and therefore would have been adjustable by one having ordinary skill based on the thickness of the cards used and the amount of deformation that is to be tolerated. Hence one having ordinary skill would have arrived at the claimed range of adhesive thickness in adjusting the proper amount of adhesive for binding the substrates.

7. Regarding claim 3, the Griltex 9 used in Copperwheat is a copolyester resin (See Page 10 of the instant specification).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Copperwheat (U.S. 6,846,759) as applied to claim 1 above, in view of Uno (U.S. 4,065,439).

9. Regarding claim 4, Copperwheat does not disclose that the hot melt adhesive include reactive epoxy resins; however, Uno discloses that thermoplastic hot melt adhesives can include reactive epoxy components to increase solvent resistance (C4, L25-30). The adhesive is still considered thermoplastic heat activable in that it is

Art Unit: 1798

thermoplastic until the crosslinking epoxy component is added. Hence it would have been obvious to have used a reactive epoxy with the hot melt adhesive of Copperwheat, as taught by Uno, to improve solvent resistance.

Response to Arguments

10. Applicant's arguments of 04/05/11 have been considered but are not persuasive.

11. First, regarding applicant's arguments against the previous 112 2nd rejection, applicant argues that there is no contradiction between a resin being thermoplastic and still having reactive resins. Indeed applicant asserts that the instant adhesive "becomes fully cured after heating." This indicates that the instant "thermoplastic" adhesive can have thermosetting (i.e. reactive) polymers therein and can even "fully cure" as applicant puts it.

12. Second, regarding the rejections on the merits, applicant asserts that "there is nothing in either Watada or Copperwheat that would suggest that the adhesive of Copperwheat could be used to bond a chip module into a card body" as taught by Watada. This is not so and ignores the obvious motivation explained by the examiner in the rejection. Watada calls for a thermoplastic adhesive to be used to bond the two polyester substrates of its card bodies. Copperwheat gives an example of a "polyester based" thermoplastic adhesive that is compatible with polyester substrates. Hence there is an obvious reason for using the Grilltex of Copperwheat in the application of Watada (i.e. card body bonding) because Watada calls for a thermoplastic adhesive for polyester substrates and Copperwheat gives an example such an adhesive. The fact that the motivation for the combination does not reference the various properties applicant has instantly claimed is not material. The combination is properly motivated and teaches the

Art Unit: 1798

use of an adhesive that possesses the instantly claimed properties in the same method instantly claimed.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL NELSON whose telephone number is (571)270-3877. The examiner can normally be reached on Monday through Friday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571) 272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1798

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MN/
05/30/11

/SOPHIE HON/
Primary Examiner, Art Unit 1798